

VARIABLE CAPACITANCE DIODE

FEATURES

- Very Small UFD Surface Mount Package
- Very Low Operating Voltage (1 to 4 V)
- Large Capacitance Ratio (A = 2.8 minimum)
- Excellent Linearity (CV Curve)
- Very Small Capacitance Deviation at Tape/Reel
- Very Low Series Resistance

APPLICATIONS

- Communications Equipment
- Multi-Channel Cordless Telephone
- Voltage Controlled Oscillator
- UHF Wireless Communication Systems

DESCRIPTION

The KV1835K is a variable capacitance diode designed for UHF applications.

The KV1835K is available in a very small UFD Surface Mount Package.

CLASSIFICATION

(Unit: pF)

RANK		1	2	3
C	MIN	11.8	12.3	13.0
	MAX	12.6	13.3	13.8

Note: Rank is determined after testing and marked on the reel. All the diodes on a reel have the same rank, but rank can not be specified when ordering.

ORDERING INFORMATION

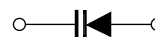
KV1835K



Tape/Reel Code

TAPE/REEL CODE
TR: Tape Right

KV1835K



KV1835K

ABSOLUTE MAXIMUM RATINGS

Reverse Voltage 28 V
Forward Current 10 mA
Power Dissipation 50 mW

Storage Temperature Range -55 to +150 °C
Operating Temperature Range -55 to +85 °C

ELECTRICAL CHARACTERISTICS

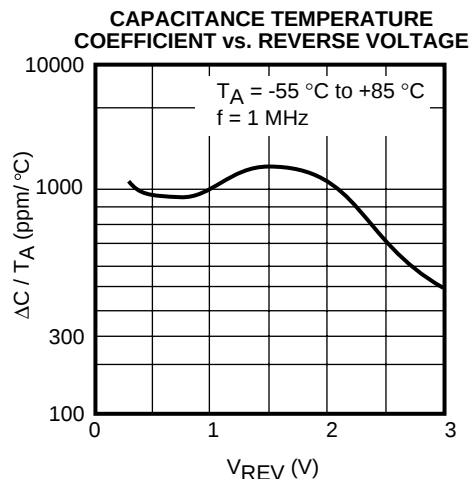
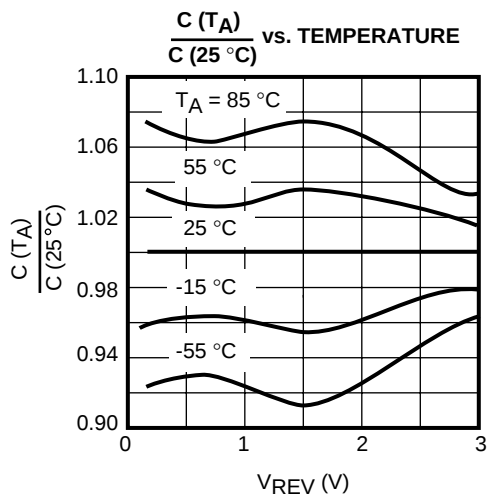
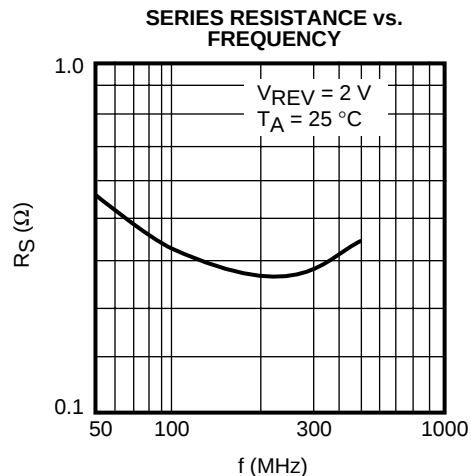
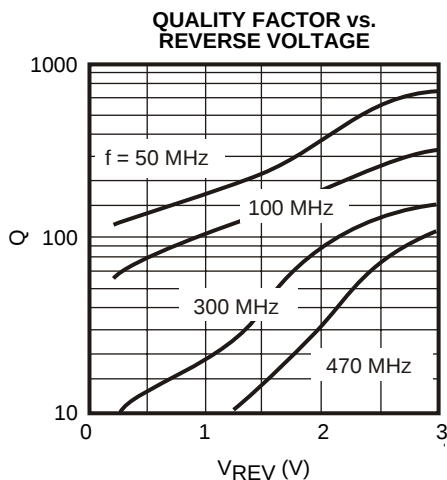
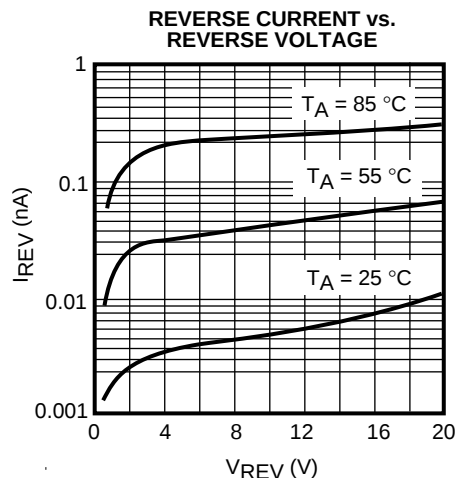
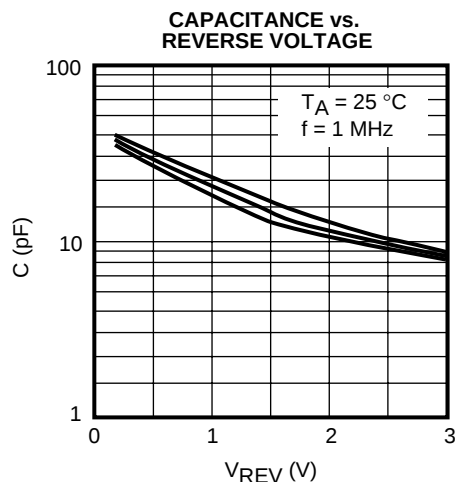
Test conditions: $T_A = 25\text{ °C}$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
V_{REV}	Reverse Voltage	$I_{REV} = 10\text{ }\mu\text{A}$	20			V
I_{REV}	Reverse Current	$V_{REV} = 16\text{ V}$			5.0	nA
$C_{0.5}$	Diode Capacitance 0.5	$V_{REV} = 0.5\text{ V}$, $f = 1\text{ MHz}$	36.5		42.5	pF
C_2	Diode Capacitance 2	$V_{REV} = 2\text{ V}$, $f = 1\text{ MHz}$	11.8		13.8	pF
R_S	Series Resistance	$V_{REV} = 1.5\text{ V}$, $f = 100\text{ MHz}$			0.6	Ω
A	Capacitance Ratio	$C_{0.5} / C_2$	2.8			

Note 1: Diode Capacitance measured with HP 4279A or equivalent instruments (at OSC level 20 mVrms, $\pm 5\text{ mVrms}$).

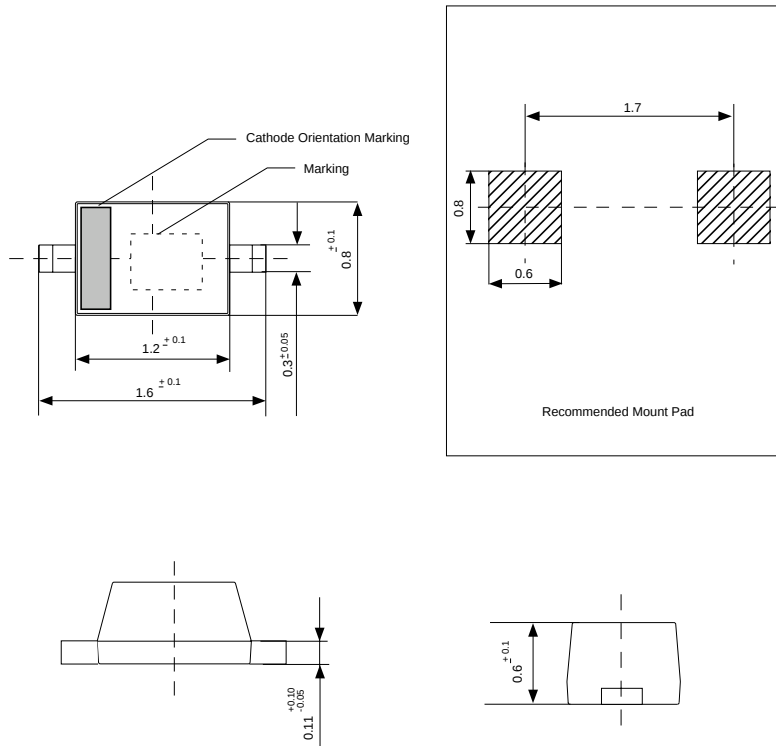
Note 2: Series Resistance measured with HP 4191A or equivalent instruments.

TYPICAL PERFORMANCE CHARACTERISTICS



PACKAGE OUTLINE

UFD



Dimensions are shown in millimeters
Tolerance: x.x $\pm$ 0.2 mm (unless otherwise specified)

Marking Information

Product Code J



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